



Application Number

IDS Flag Clearance for Application 10792270

IDS Information

Content	Mailroom Date	Entry Number	IDS Review	Last Modified	Reviewer
M844	2005-10-14	18	Y <input checked="" type="checkbox"/>	2006-03-20 16:14:50.0	LKiliman
M844	2004-05-28	14	Y <input checked="" type="checkbox"/>	2006-03-20 16:14:50.0	LKiliman
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PALM INTRANET

Inventor Name Search Result

Your Search was:

Last Name = OLDORFF

First Name = FRANK

Application#	Patent#	Status	Date Filed	Title	Inventor Name
10792270	Not Issued	71	03/04/2004	Process for finishing a wooden board and wooden board produced by the process	OLDORFF, FRANK
10932337	Not Issued	30	09/02/2004	Method for sealing a building panel	OLDORFF, FRANK
11380597	Not Issued	25	04/27/2006	PROCESS FOR FINISHING A WOODEN BOARD AND WOODEN BOARD PRODUCED BY THE PROCESS	OLDORFF, FRANK

Inventor Search Completed: No Records to Display.

Search Another: Inventor

Last Name	First Name	
<input type="text" value="Oldorff"/>	<input type="text" value="Frank"/>	<input type="button" value="Search"/>

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Search Results - Record(s) 1 through 9 of 9 returned.

1. Document ID: US 20060182938 A1

AB: A process for finishing a wood or wooden board, in particular an MDF or HDF board, with an upper side and an underside. The process includes applying a sealing layer of melamine resin to the upper side of the board and printing a decoration onto the sealing layer. A protective layer is applied of melamine resin to the decoration and the board is pressed under the action of temperature until the protective layer and the sealing layer melt and bond to each other with the inclusion of the decoration printed on.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Des
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2. Document ID: US 20040191547 A1

AB: A process for finishing a wood or wooden board, in particular an MDF or HDF board, with an upper side and an underside. The process includes applying a sealing layer of melamine resin to the upper side of the board and printing a decoration onto the sealing layer. A protective layer is applied of melamine resin to the decoration and the board is pressed under the action of temperature until the protective layer and the sealing layer melt and bond to each other with the inclusion of the decoration printed on.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Des
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3. Document ID: US 6551702 B1

AB: Aqueous melamine resin dispersions comprise as discontinuous phase a melamine resin stabilized with a combination of a cationic protective colloid and an anionic protective colloid.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Des
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4. Document ID: US 5830548 A

AB: Compositions and methods for manufacturing composite laminate structures incorporating sheets having a moldable matrix are disclosed. Suitable compositions are prepared by mixing together a water dispersable organic binder, water, and appropriate additives (such as aggregates and fibers) which impart predetermined properties so that a sheet formed therefrom has the desired performance criteria. The compositions are formed into sheets by first extruding them into a sheet and then calendaring the sheet using a set of rollers. The calendered sheets are dried in an accelerated manner to form a substantially hardened sheet. The drying process is performed by heated rollers and/or a drying chamber. The inorganically filled sheets so formed may have properties substantially similar to sheets made from presently used materials like paper, cardboard, polystyrene, or plastic. Such sheets can be rolled, pressed, scored, perforated, folded, and glued before or after being incorporated into composite laminate structures. Such composite laminate structures have especial utility in the mass production of containers, particularly food and beverage containers.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KNOC	Draw	Des
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5. Document ID: US 5629259 A

AB: The present invention relates to image-formation on any selected kind of objective body. The characterizing features reside in such that, based upon fed image data, required images are formed on an image-transferable sheet acting for image carry-over service and in reliance on sublimation image transfer technique, and then, by the use of said sheet with said images thus formed thereon, the formed images thereon are transferringly applied on the objective body. By adopting the above measures, the objective body can be formed sharply and clearly with any desired images, irrespective of kind and configuration thereof, with such superior results of highly improved unity and solidability between the formed images and the objective body to be decorated with.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KNOC	Draw	Des
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6. Document ID: US 4890656 A

AB: In production of a decorative article from piece board of a decorative plywood, a decorative sheet for the decorative plywood is formed by heat pressing a powdery sheet on a material sheet in order to simplify coating process.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KNOC	Draw	Des
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7. Document ID: US 4856857 A

AB: A transparent-type hologram comprising a transparent hologram-forming layer and a holographic effect-enhancing layer comprising a thin transparent film, the holographic effect-enhancing layer being laminated on the hologram-forming portion of the transparent hologram-forming layer. The holographic effect-enhancing layer has a refractive index different from that of the transparent hologram-forming layer.

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Des
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8. Document ID: US 3981958 A

AB: A new graft copolymer composed of an ethylene/propylene/non-conjugated diene terpolymer backbone and a homopolymerized or copolymerized methacrylic ester graft moiety. The graft copolymer is produced by grafting a lower alkyl methacrylate alone or in mixture with other ethylenically unsaturated monomer or monomers copolymerizable therewith to an ethylene/propylene/non-conjugated diene terpolymer in the presence of a radical polymerization initiator. The graft copolymer is useful as resinous or rubbery component in a coating or binding composition for treating various inorganic and organic materials including glass and fibers.

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Des
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9. Document ID: US 2951765 A

AB: No data.

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Des
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PATENT APPLICATION FULL TEXT AND IMAGE DATABASE



(1 of 1)

United States Patent Application	20050089644
Kind Code	A1
Oldorff, Frank	April 28, 2005

Method for sealing a building panel

Abstract

A process for sealing a construction plate of wood or a wood material, having a top side and a bottom side, with the following steps: a) application of a liquid resin to the top side, b) drying of the resin, and c) pressing the construction plate under the influence of temperature, so that the resin at least partially melts.

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Intern'l Class:	B05D 003/02

Foreign Application Data

Date	Code	Application Number
Sep 6, 2003	DE	103 41 172.0

Claims

1. A process for sealing a construction plate of wood or a wood material, having a top side and a bottom side, with the following steps: applying a liquid resin on the top side, drying the resin, and pressing the construction plate under the influence of temperature so that the resin at least partially melts.
2. The process according to claim 1, further comprising the following steps: application of the resin to the bottom side, drying the resin, pressing the construction plate under the influence of temperature so that the resin at least partially melts.
3. The Process according to claim 1 or 2, wherein the resin is applied in multiple layers and each layer is dried before the next is applied.
4. The process according to one or more of the foregoing claims, wherein the resin is a synthetic resin, especially a melamine resin.
5. The process according to one or more of the foregoing claims, wherein the resin is stained.
6. The process according to one or more of the foregoing claims, further comprising a color layer is applied on the top side or on the bottom side under or between the resin layers.
7. The process according to claim 1 or 2, further comprising a relief is embossed into the resin layer on pressing.
8. The process according to claim 1 or 2, wherein corundum is mixed into or scattered onto the resin layer.
9. The process according to claim 1 and 2, wherein the sealing is performed simultaneously on the top side and the bottom side.
10. The process according to claim 1, 2 or 9, wherein the pressing is performed in a continuous press.

Description

FIELD OF THE INVENTION

[0001] The invention relates to a process for sealing a construction plate of wood or of a wood material having a top side and a bottom side.

BACKGROUND DESCRIPTION

[0002] Construction plates may be floor boards, such as parquet; sheathing boards, or sheets for furniture building. These plates are made of solid wood, especially doweled and glued wood, or they may consist of a core of a wood material such as MDF, HDF (medium-density fiberboard, high-density fiberboard) or floor plates onto which a real wood veneer is cemented. OSB boards (Oriented Strand Boards) are the principal sheathing boards used.

[0003] The surfaces of these plates must be sealed to protect them from environmental influences. Penetration of moisture in particular must be prevented for floor boards. The surface of the board is often painted for that purpose. Paint is relatively soft, and the paint coat is subject to wear, especially in parquet floors, so that the floor must be resealed often. In closed spaces, that is linked with unpleasant features, as the old coat of paint must be sanded off before a new one can be applied. The fine sanding dust deposits everywhere, and then must be tediously removed.

[0004] Laminated panels are sealed with a coating of synthetic resin. To produce laminated panels, a paper sheet printed with a pattern is laid on a carrier board of MDF, HDF or chipboard, on which has been laid an overlay, a layer of synthetic resin or a paper layer soaked with synthetic resin. Then the board is pressed, with heating, so that the overlay, including the paper layer, bonds to the surface of the board. For floorboards, corundum particles are incorporated in the finished overlay to increase resistance to wear. Then individual panels are sawed out of the boards so produced.

[0005] A resin is not only less expensive than paint, but also harder. Placing the paper sheet or a ready-made overlay onto the top side of the plate of wood material must be done carefully. Handling of the very thin layers is complicated and requires precisely operating machines so as to make sure that only one individual layer of the overlay is lifted from a stack. For a laminated plate, the bottom side must be given an "undercoat" that compensates for the tensile stresses produced on the plate core by the decorated layer in order to prevent bending of the plate, and especially of the panels sawed out later, in the longitudinal direction.

[0006] A parquet structure is known from EP B1-0 560 870, in which a filler resin or paint is impregnated into the interior and into the intermediate spaces of the vertical grain of the wood, under the varnish layer which forms the surface coating, so that the amount of the paint is several times greater than the amount of the parquet varnish. After the filler resin has penetrated in, the boards are preheated. After cooling they absorb the resin down to a sufficient depth to form a "barrier layer" which prevents the expensive varnish penetrating in too deeply when the parquet is later sealed. This measure provides harder surfaces than the usual sealed parquetry with the same consumption of varnish.

[0007] It is known from DE C2-37 35 368 that a powdered resin layer can be scattered on a plate of material and then pieces of inlay can be placed on that. Then the powder layer is hot-pressed to melt the resin and bond it to the plate.

SUMMARY OF THE INVENTION

[0008] Based on that statement of the problem, a process will be described for sealing a construction board of wood or a wood material with a real wood surface, with which the wear-resistant surface known for laminated plates can be attained, but which is simpler and can be carried out faster.

DETAILED DESCRIPTION OF EMBODIMENTS OF THE INVENTION

[0009] The solution of the problem is arrived at through the following steps:

[0010] a) applying liquid resin to the top side,

[0011] b) drying the resin,

[0012] c) pressing the construction plate under the influence of temperature, so that the resin at least partially melts.

[0013] The liquid resin can be rolled on, sprayed on, or poured on. It is considerably easier to handle than a premade resin layer. If the resin layer is applied correspondingly thick, the surface hardness known for laminated plates is produced. Thus it is possible to provide a construction plate which combines the positive properties of solid wood or veneered wood material with the positive properties of a laminate. The considerably harder resin gives very high wear resistance, which can be increased even more by mixing corundum particles into the liquid resin, or by scattering them on it.

[0014] Use of appropriately polished press surfaces in the press can produce degrees of gloss on pressing the construction plate. A press plate polished to a high gloss results in highly glossy or even reflective surfaces. That can generate particularly beautiful visual effects. An OSB plate can be smoothed to eliminate unevennesses in the surface before application of the resin coating.

[0015] The bottom side of the construction plate can be sealed in the same manner. Then OSB plates in particular, which exhibit very high strength, can be used as concrete form sheets. Not only does the synthetic resin layer prevent penetration of moisture into the form sheet, but it also increases its life because of the hardness of the surface.

[0016] The resin can be applied in multiple layers, with each layer being dried before the next is applied.

[0017] It is preferable for the resin to be a synthetic resin, especially a melamine resin.

[0018] The resin can be stained to produce special visual effects. A color layer can be applied between the resin layers on the top or bottom sides. The color layer can be printed. That has the advantage that the appearance can be improved. For instance, an oak or rosewood pattern, with the appropriate grain and color, can be applied to a pine veneer, increasing the value of the real wood surface.

[0019] A relief matching the pattern (of the wood grain) can be embossed in the resin layer on pressing so as to match the feel of the sealed surface to that of the unsealed wood.

[0020] Other fillers can also be mixed into the resin layer, or sprinkled onto individual layers. Application of such a layer to the bottom side can, for instance, improve the impact sound characteristics of a floor board.

[0021] It is preferable to coat the top and bottom sides at the same time. Not only does that provide completely new and improved product properties, but it also simultaneously makes a substantial reduction in the production cost of the construction plate.

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